

Honeywell Docket No. 30-5010 - 4962  
Bingham Docket No.: 7220012001-3222000

REMARKS

CLAIM REJECTIONS

Claims 40-55 are rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Applicant respectfully disagrees, especially in view of the amendments presented herein.

Claim 40 no longer recites the phrase "the substrate and the polymer couple".

Claim 49 no longer recites the phrase "the first polymer and the second polymer couple".

Claims 40 and 49 are amended to take into account the Examiner's suggestions on page 4 of the Office Action.

Claims 41-48 and claims 50-55 are allowable as being dependent on allowable claims 40 and 49, with respect to the 35 USC §112 rejection.

Claims 43 and 52 are canceled herein, thus mooting the Examiner's rejection in point 11, page 4 of the January 5, 2004 Office Action.

SPECIFICATION

Page 20 of the Specification is herein amended to comply with the Examiner's suggestions on page 5 of the January 5, 2004 Office Action.

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CLAIM OBJECTIONS

Claims 43 and 52 are objected to as containing informalities. Claims 43 and 52 are canceled herein, thus mooting the Examiner's objection.

Claims 47 and 48 are objected to as containing informalities regarding the candidate interfaces. Claims 47 and 48 are amended herein, and the Applicant respectfully requests that the Examiner consider the amendments made claims 47 and 48 as addressing the Examiner's objections.

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35 USC §§102/103

Claims 40-55 are rejected under 35 USC 102(b) as being anticipated by or, in the alternative, under 35 USC 103(a) as obvious over Saida et al. (US Patent No.: 5718039). The Applicant respectfully disagrees.

Claim 40 of the present application recites: "An electronic component, comprising: a candidate substrate; and a candidate polymer, wherein the candidate polymer comprises a high adhesive strain component with respect to the candidate substrate; wherein the candidate substrate and the candidate polymer are coupled to one another to form an interface, and wherein the substrate and the polymer are selected as candidates based on a software program."

Claim 49 of the present application recites: "An electronic component, comprising: a candidate substrate; a candidate first polymer; and a candidate second polymer, wherein the candidate first polymer comprises a high adhesive strain component with respect to the candidate substrate and the candidate second polymer and wherein the candidate second polymer comprises a high adhesive strain component with respect to the candidate first polymer; wherein the candidate substrate, the candidate first polymer and the candidate second polymer are coupled to one another to form an interface, and wherein first polymer and the second polymer are selected as candidates based on a software program."

In claims 40 and 49, the substrates and polymers are "candidate" substrate and polymers, wherein the candidate polymer(s) have high adhesive strain components with respect to the candidate substrate or the candidate polymer. In addition, the candidates are selected as candidates based on a software program. However, it is important to note that the candidate polymers have particular characteristics with respect to the particular substrate or polymer - which is the degree of adhesive strain based on strain cycling information - that contributes to how those materials are chosen to be incorporated into the electronic component. Example 1, pages 16 and 17, of the present specification discusses the concepts of adhesive strain components and strain cycling and how these concepts are utilized to maximize the adhesion between substrates and polymers. The concept of adhesive strain

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components with respect to the candidate substrate, candidate polymer, candidate first polymer or candidate second polymer are not product-by-process limitations in the present application. An adhesive strain component would be similar to any physical characteristic of a material with respect to or in combination with another material, such as a melting point, a boiling point or a vaporization point.

Saida discloses electronic components that comprise interfaces formed between polymers and substrates, however, Saida does not disclose that an adhesive strain component or strain intercepts are taken into account when pairing substrates with their most compatible polymers to form interfaces. Pairing a substrate with a polymer without knowledge and utilization of the adhesive relationship between the two is one of the detrimental situations that the present application addresses. The present application shows how an electronic component can be assembled in an analytical and deliberate manner. The teachings of Saida do not disclose to one of ordinary skill in the art the concepts of adhesive strain components and strain cycling/strain intercepts and how to use these concepts to put together an efficient electronic component. In addition, Saida does not suggest or motivate one of ordinary skill in the art to produce an electronic component by taking into account the adhesive strain components of a polymer with respect to a substrate.

Also, Saida does not anticipate claims 40 or 49 of the present application. "Anticipation requires the disclosure in a single prior art reference of each element of the claim under consideration." *W. L. Gore & Assocs. v. Garlock, Inc.*, 721 F.2d 1540, 220 USPQ 303, 313 (Fed. Cir. 1983) (citing *Soundscriber Corp. v. United States*, 360 F.2d 954, 148 USPQ 298, 301 (Ct. Cl.), adopted, 149 USPQ 640 (Ct. Cl. 1966)). Further, the prior art reference must disclose each element of the claimed invention "arranged as in the claim". *Lindermann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)). Saida does not disclose that an electronic component comprises a candidate substrate; and a candidate polymer, wherein the candidate polymer comprises a high adhesive strain component with respect to the candidate substrate; wherein the candidate substrate and the candidate polymer are coupled to one another to

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form an interface, and wherein the substrate and the polymer are selected as candidates based on a software program. Saida also does not disclose an electronic component that comprises a candidate substrate; a candidate first polymer; and a candidate second polymer, wherein the candidate first polymer comprises a high adhesive strain component with respect to the candidate substrate and the candidate second polymer and wherein the candidate second polymer comprises a high adhesive strain component with respect to the candidate first polymer; wherein the candidate substrate, the candidate first polymer and the candidate second polymer are coupled to one another to form an interface, and wherein first polymer and the second polymer are selected as candidates based on a software program.

Therefore, claims 40 and 49 of the present application are allowable over and in view of Saida. In addition, claims 41-42, 44-46, 48, 50-51 and 53-57 are allowable over and in view of Saida by virtue of their dependency on claims 40 and 49, respectively.

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**REQUEST FOR ALLOWANCE & TELECONFERENCE**

Claims 40-42, 44-46, 48-51 and 53-57 are pending in this application, and the Applicant respectfully requests that the Examiner reconsider these claims in light of the arguments presented and allow all pending claims. The Applicant also respectfully requests that if any of the pending claims are not considered allowable in light of this Response, that the Examiner contact the undersigned Attorney-of-Record for a teleconference to resolve any outstanding issues.

Respectfully submitted,

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Please acknowledge receipt of the following by affixing hereon the Official date stamp and returning this card to our office.

**Title:** Response After Final  
Novel Polymer/Substrate and Polymer/Polymer Interfaces and  
Methods of Modeling and Forming Same  
**Inventor:** Honeywell - Nancy Iwamoto  
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(11 pages); and (3) postcard.